

REMARKS/ARGUMENTS

Status of the Claims

Claims 1-2 & 4-20 are pending in this application.

Claims 1-2, 4-13 & 15-20 are rejected.

Claim 14 is objected to.

The examiner has rejected claims 1, 4, 5, 10 and 11 under 35 U.S.C. 103(a) as being unpatentable over Rayment '298 in view of Uhlig '063 and "NVH Reduction Trends" (http://www.sae.org/automag/nvh_reduction/03.htm).

United States Patent No. 5,551,298 to Rayment discloses an apparatus for identifying vibration induced noise in a vehicle. Specifically, an operator uses an input/display module 24 to record when a vibration-induced noise begins and ends. The operator moves an indicator line across the screen of the input/display module 24, when the vibration-induced noise is heard, the operator presses a button to fix the position of the indicator line. (Col. 3, ll. 33-37.) Once the first line is fixed, the operator continues to listen to the vibration-induced noise, i.e., rattle or squeak being monitored. When the vibration induced noise ceases, the operator pushes the button again to fix the position of a second line in a similar manner. (Col. 3, ll. 47-51.) The apparatus does not measure the sound level emitted from the product. Instead, the operator subjectively determines when the noise starts and when it stops. (Col. 2, ll. 17-21.)

United States Patent No. 6,257,063 to Uhlig discloses a method for measuring vibration damping, specifically the vibration damping capability of a part. (Col. 3, ll. 13-15.) An exciter coil 46 electromagnetically induces vibrations in the part such that the part vibrates at its resonant frequency. (Col. 3, ll. 46-54.) The level or amplitude of vibrations induced in the part is measured with a transducer such as a microphone 54.

(Col. 3, ll. 55-57.) The microphone 54 measures the sound or vibration level and provides a measure of the sound level to a measuring amplifier 64. When the measuring amplifier 64 indicates that the peak or resonant frequency has been received and transmitted by the microphone 54 the frequency readout of the waveform generator 56 is noted. (Col. 4, ll. 4-15.) When the peak or resonant frequency is reached, the gain of the audio power amplifier 60 of the microphone 54 is adjusted to produce a predetermined measured output voltage. (Col. 4, ll. 19-23.) At this point, a switch 58 interrupts the output of the waveform generator 56 and deactivates the exciter coil 46 thereby eliminating the input of vibrational energy into the part and causing the vibrations in the part to decay. The decay is recorded and graphed by a real-time analyzer 68. (Col. 4, ll. 27-33.) The real-time analyzer 68 plots the decay of the sound level produced by the part as a function of time. (Col. 4, ll. 35-40.) Accordingly, Uhlig '063 measures the decrease in amplitude of the decaying vibrational wave of the part once the exciter coil 46 is switched off.

"NVH Reduction Trends" (http://www.sae.org/automag/nvh_reduction/03.htm), as best understood, indicates that percentile statistical measures N10 and N50 are used to describe a set of noise measurements as a single value.

Contrary to the position taken by the examiner, there is no teaching or suggestion to combine Rayment '298 and Uhlig '063 and "NVH Reduction Trends." The examiner argues that it would have been obvious to incorporate the teachings of Uhlig '063 into Raymond's invention "because the modification would determine whether the sound level emitted from the product is within the acceptable range or not and necessary actions would be performed on the product when the sound level of the product is not within the acceptable range to assure the proper functioning of the

product." The examiner offers no support for this position and does not indicate any teaching or suggestion from either reference that would teach applicants invention.

Uhlig '063 is concerned with measuring vibration damping of a part including the step of vibrating the part at the resonant frequency of the part. Once the part reaches resonant frequency, the exciter coil used to produce resonant frequency in the part is deactivated and the amplitude of the vibration decays.

Uhlig '036 address measuring and recording the decaying sound level signal received from the measuring amplifier, "NVH Reduction Trends" discloses statistical measurements that describe a set of noise measurements and Rayment '298 deals with two discreet points, nothing in these three references suggests a combination and even if the references were combined as proposed, they would not teach or suggest applicants invention as claimed. The examiner merely points out that Uhlig '063 uses a microphone to measure sound level. The examiner fails to indicate how the incorporate this into Rayment's invention. Rayment '298 is concerned with when the sound starts and when it ends, along with the vibration frequencies that these points occur, not the level of the sound. Accordingly, applicants submit that independent claims 1 and 10 and the claims dependent therefrom are allowable as written.

The examiner has rejected claims 2, 6-8, 12, 13 and 15-20 under 35 U.S.C. 103(a) as being unpatentable over Rayment '298 in view of Uhlig '036 and "NVH Reduction Trends" and further in view Hamada et al. U.S. 2004/0015251. Claims 2, 6-8, 12, 13, and 15-17 are allowable for the reasons set forth above. Regarding claims 18-20, claim 18 includes as an element the step of measuring and recording the sound level emitted from the vehicle during operation and computing an objective metric based on the recorded sound level. Once again, nothing in Rayment '298, nor the combination

of Rayment '298 with Uhlig and "NVH Reduction Trends" teaches the use of recording the sound level emitted during vehicle operation to compute an objective metric. Adding Hamada et al, as a reference does not change this. Accordingly, applicants submit that claim 18 and the claims dependent therefrom are allowable as written.

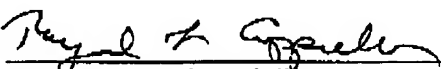
It is respectfully submitted that in view of the above amendments and remarks the claims are patentably distinguishable because the cited patents, whether taken alone or in combination, do not teach, suggest or render obvious, the present invention. Therefore, applicant submits that the pending claims are properly allowable, which allowance is respectfully requested.

The Examiner is invited to telephone the applicant's undersigned attorney at (313) 337-1069 if any unresolved matters remain.

Please charge any cost incurred in the filing of this amendment, along with any other costs, to Deposit Account No. 06-1510. If there are insufficient funds in this account, please charge the fees to Deposit Account No. 06-1505.

Respectfully submitted,

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